National Biomedical Imaging Archive - NBIA

Contents of this Page

At-a-Glance Details

- Version Number and Release Date: 6.4, October 2016
- Primary audience: Investigators and Researchers
- Compatibility Level: Not yet determined
- Installation Level: Intermediate - technical assistance may be required, download may require supporting infrastructure or software
- System Requirements: Provides web-based access to de-identified DICOM images, markups, and annotations using role based security. The NBIA download package is a ZIP package that includes the NBIA application, supporting libraries, RSNA Clinical Trial Processor (CTP) submission client/server (with NBIA modifications), and associated documentation.

CBIIT and NCIP Links

- CBIIT website
- NCIP landing page
- NCI Biomedical Informatics Blog
- NCIP on Twitter @NCI_NCIP

Tool Overview

The National Biomedical Imaging Archive (NBIA) is a free and open source service and software application that enables users to securely store, search, and download diagnostic medical images, providing a searchable national repository integrating *in vivo* cancer images with clinical and genomic data. Using role-based security, NBIA provides web-based access to de-identified DICOM images, image markup, annotations, and rich metadata. The NBIA download package is a ZIP package that includes the NBIA application, supporting libraries, the RSNA MIRC application (with NBIA modifications), documentation, and a sample NBIA database.

Along with the Clinical Trial Processor software from the Radiological Society of North America, NBIA supports customized de-identification of images. NBIA is able to integrate with other imaging applications to cull various data types, such as image annotations, clinical data, genomic data, and other research files, such as RT objects. NBIA can also federate with other instances of NBIA to support the response of multiple NBIA servers to a single query.

NCI's hosted instance of NBIA is freely available and provides researchers and clinicians with a robust DICOM archive that can securely share and access images to enhance scientific research and support clinical decision making. Anyone can deploy a local node of NBIA.

The ultimate goals of the project include:

1. Creation of an imaging informatics infrastructure that provides cost-effective support for purpose-built and other databases as necessary, precluding the need to create separate infrastructure for each database.
2. Development of searchable imaging reference libraries linked to clinical outcomes data to assist researchers and practitioners.
3. Availability of the archive for mining and integration by the broader research and clinical community.
4. Robust support for data-driven decision making in oncology and medical practice in general by clinicians throughout the world.

Installation and Downloads

NBIA Artifacts

NBIA provides a simplified approach to install on Linux and Windows platforms. Much of the installation process has been automated so that if you accept the default values, you can install NBIA by typing the single command `ant`. With the exception of the database, all supporting tools are automatically installed and configured as part of the installation. The installation package contains the binaries and scripts necessary to install the application and API. Refer to the Installation Guide for details.

Documentation is available on the NBIA wiki. There is also an NBIA GitHub Respository

Sign up for the NBIA User listserv to receive updates about this tool.

Current Version

NBIA 6.4 Artifacts	File	Size
NBIA Distribution Package	nbia_install_6.4.zip	587 MB
CTP Client Package (including FileSender)	CTP_Client.zip	15.6 MB
NBIA Release Notes	release_notes.txt	13 KB

NBIA 6.3 Artifacts	File	Size
NBIA Distribution Package	nbia_install_6.3.zip	587 MB
CTP Client Package (including FileSender)	CTP_Client.zip	15.6 MB
NBIA Release Notes	release_notes.txt	13 KB

NBIA 6.2 Artifacts	File	Size
NBIA Distribution Package	nbia_install_6.2.zip	587 MB
CTP Client Package (including FileSender)	CTP_Client.zip	15.6 MB
NBIA Release Notes	release_notes.txt	13 KB

Previous Releases

NBIA 6.1 Artifacts	File	Size
NBIA Distribution Package	nbia_install_6.1.zip	587 MB
CTP Client Package (including FileSender)	CTP_Client.zip	15.6 MB
NBIA Release Notes	release_notes.txt	13 KB

NBIA 6.0 Artifacts	File	Size
NBIA Distribution Package	nbia_install_6.0.zip	587 MB
NBIA grid client libraries (including caGrid libraries):	client-jars-full.zip	14.3 MB
NBIA grid client libraries (nbia related jars only)	client-jars-nodeps.zip	393 KB
CTP Client Package (including FileSender)	CTP_client.zip	15.6 MB
NBIA Release Notes	release_notes.txt	13 KB

NBIA 5.2.1 Artifacts	File	Size
NBIA Distribution Package	nbia_install_5.2.1.zip	499 MB
NBIA GUI Installer	nbia_gui_distribution_5.2.1.jar-201311261449.jar	624 MB
NBIA grid client libraries (including caGrid libraries):	client-jars-full.zip	14.3 MB
NBIA grid client libraries (nbia related jars only)	client-jars-nodeps.zip	393 KB

CTP Client Package (including FileSender)	CTP_client.zip	15.6 MB
NBIA Release Notes	release_notes.txt	16 KB

NBIA 5.2 Artifacts	File	Size
NBIA Distribution Package	nbia_install_5.2.0.zip	499 MB
NBIA GUI Installer	nbia_gui_distribution_5.2.0.jar-201309261655.jar	624 MB
NBIA grid client libraries (including caGrid libraries):	client-jars-full.zip	14.3 MB
NBIA grid client libraries (nbia related jars only)	client-jars-nodeps.zip	393 KB
CTP Client Package (including FileSender)	CTP_client.zip	15.6 MB
NBIA Release Notes	release_notes.txt	16 KB

NBIA 5.1 Artifacts	Size
nbia_install_5.1.0.zip	547 MB
nbia_gui_distribution_5.1.0.jar-201212201337.jar	673 MB
client-jars-full.zip	14.2 MB
client-jars-nodeps.zip	388 KB
CTP_client.zip	15.1 MB
release notes.txt	4 KB

Forum and Support

Support

- End User Forum
- Developer Forum
- CBIIT Application Support email
- NBIA listserv

Defects and Feature Requests

- Report a defect or request a feature for NBIA on NCI JIRA

Open Source Development

Contact Application Support for information about open source development and NBIA.

Documentation and Training

Refer to NBIA Documentation.

Online help is available in the application.

No training materials are available. Refer to Presentations, Demos and Other Materials for an overview and demo.

Presentations, Demos and Other Materials

- NBIA Demonstration– 20-minute audio over slides and screencast (turn speakers on). If the slides appear to "freeze" during playback, press pause and then play to realign the playback stream. (Login required)

- - Download Demo Slides – download of the Power Point slides for this demonstration.
- Meetings and Reports – Reports of NBIA operations and maintenance
- DICOM Image Viewers
- ImageJ
- FusionViewer
- OsirixViewer
- ClearCanvas
- 3D Slicer
- Getting started with CTP (Clinical Trials Processor)
- Web-based Tools For Imaging Research
- NBIA Mouse GBM

Integration with Other Tools

caIntegrator2 can query for imaging data in an instance of NBIA via a Java API. Once a group of patients is selected, you can access NBIA to review the patients images and associated metadata, and download the DICOM data as needed.